

University of Texas Bulletin

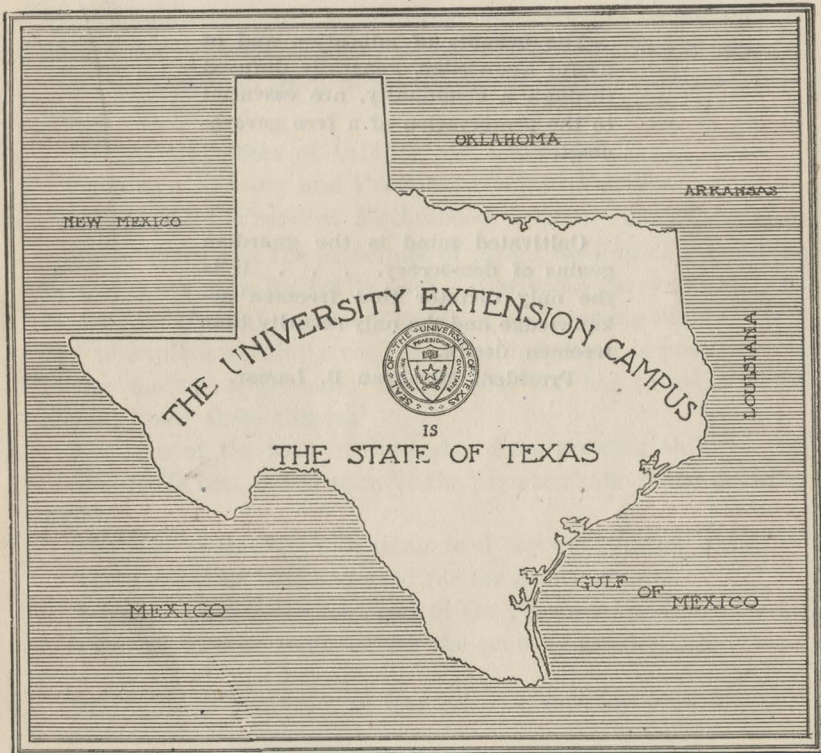
No. 1707: February 1, 1917

Food for Growing Children

By

JESSIE P. RICH

Formerly Extension Lecturer Home Economics, Department
of Extension, University of Texas



Published by the University six times a month and entered as second-class matter at the postoffice at Austin, Texas

The benefits of education and of useful knowledge, generally diffused through a community, are essential to the preservation of a free government.

Cultivated mind is the guardian genius of democracy. . . . It is the only dictator that freemen acknowledge and the only security that freemen desire.

President Mirabeau B. Lamar.

Food for Growing Children

The food question is undoubtedly the most important problem in the welfare of the growing child. It has profound effect upon his physical development, his disposition and his character. Indiscriminate feeding is the cause of much of the trouble and worry of mothers. The child is allowed to eat the foods prepared for the adult. No account is taken of the undeveloped, immature condition of his digestive organs. He has only limited facilities for caring for his foods. The digestive juices are not in full strength and the means for mastication are undeveloped. These points should be taken into consideration in feeding, and the food administered to the growing child should be of such a nature and in such condition as to recognize his limitations.

Many books and lectures are available for the feeding of very young children.

Holts: "Diseases of Infancy and Childhood."

Chapin: "Theory and Practice of Infant Feeding."

Campbell: "Practical Motherhood."

These books give the principles of infant feeding and modification of cow's milk for bottle food. Few books carry the subject of feeding through the early years of the growing child. They fail to explain carefully the diet after babyhood is past.

The mother who would do the best for her growing child should know these things:

The uses of the food in the body to the growing child.

The foods best suited to meet the requirements of the growing child.

The best method of preparing food for the growing child.

The amount of food required for the growing child.

When to administer the food to the growing child.

The cost of food required for the growing child.

THE USES OF THE FOOD IN THE BODY TO THE GROWING CHILD.

Foods are taken into the system to perform special work. The body may be likened to a great machine in motion. The efficiency

of this machine comes from the fuel or food supplied. The fuel in the human machine must do more than furnish power to do work. It must keep the machine in a state of repair and increase the size from that of the infant to the adult. The machine can never completely shut down its activity for repair or growth. The foods are the means of increasing the size of the growing child. They are the sources of power and activity.

THE FOODS BEST SUITED TO MEET THE REQUIREMENTS OF THE
GROWING CHILD

The food materials are of great variety but analysis shows that all of them are but varying combinations of a few simple foods just as all of our English words are made from twenty-six letters. These basic foods are carbo-hydrates, including starch and sugar, proteins, fats and mineral salts.

The starches are well known substances and occur in such vegetables as cereals and potatoes.

Sugar is largely used in commercial form but occurs also in fruit and vegetables and in some animal products in small quantities. Sugar and starch are specially suited to furnish the heat and energy required by the body. The best starches for children are obtained from such cereals as rice, wheat, corn, oats, and from potatoes. Sugar furnishes a beneficial source of energy if eaten in small quantities, but for the growing child large amounts of sugar are considered especially harmful. Possibly the best administration of sugar is in the date and figs eaten in small quantities as dessert for luncheon or dinner.

The fats are easily recognized and are further sources of heat and energy. The best sources of fat for children are cream, butter, olive oil, cotton-seed oil, nuts, and bacon.

The substances required by the body to repair tissue and to build the muscles are called protein. This is a material found especially in eggs, the lean of meats, and milk. Protein foods also furnish heat and energy but they are expensive and disastrous to health if too much is taken.

The best protein foods for the growing child are those found in milk, eggs, chicken, mutton and beef, and nuts when properly ground and pulverized; cheese rightly cooked, beans, peas and lentils.

Mineral salts are also needed building material. They are essential to the growth of the bones and the teeth and they are necessary constituents of the blood and body fluids. Some of the more important mineral salts are iron, lime, phosphorous, and potassium. These mineral salts are found in many foods, especially in milk, green vegetables, fresh fruits, and cereals. It is necessary that the growing child have these in his diet. Many children do not like green vegetables but if they are taught to eat them at an early age, this dislike can often be obviated. The child can frequently be taught to eat the vegetables through means of Scotch broths, cream soups, and meat stews.

Onions, cabbage, spinach, and the yolk of eggs are among the best sources of iron. Vegetables for very young children should be carefully rubbed through a puree sieve. Lime is largely obtained from milk. Children who do not like milk can be given it in disguised form as in a cream soup, a junket pudding, or in a cup of cocoa.

THE BEST METHOD OF PREPARING FOODS FOR THE GROWING CHILD

The protein, starches, and the fats all have a particular temperature which is best suited to their preparation. In the case of the protein foods a knowledge of the effects of heat on protein is necessary. Eggs are a typical protein food. To determine the effect of heat on eggs put a slightly beaten egg into a buttered sauce pan and place it over a slow fire, stirring the egg constantly until a jelly like mass is formed. Now allow more heat and notice the result. The egg becomes hard and tough. High temperature applied to any form of protein causes it to shrink and harden and renders it difficult to digest. A low temperature below the boiling point is best suited to cook protein foods and makes them easily digestible. The reason custards curdle is because the egg has been cooked at too high a temperature. The egg is especially necessary in the diet of the growing child and too much cannot be said about its proper method of preparation. What is true of the temperature of the cooking of the egg is true of all protein foods.

On the other hand, starches and foods containing starches require a high temperature. This is necessary to break up the starch grains and put them into a condition of digestibility. The

temperature in moist heat would be what we call the boiling point, 212 degrees Fahrenheit. This would suggest that cereals, potatoes, and other starchy foods should be cooked at a high temperature or for a longer time at a temperature a few degrees below the boiling point.

Fats and fatty foods should be cooked in such a way that the fat does not become too brown. When fat is subjected to too high a temperature it splits up and changes into substances irritating to the lining of the stomach. A dark burning of the fat indicates this splitting. Browned butter and foods browned in butter and very crisp brown bacon are very hard to digest. It is because of this fact that we find one of the greatest objections to fried foods, especially for children.

Further principles may be given to govern the feeding of growing children.

First: The foods for the growing child should all be simple and simply prepared. That means that the diet should contain no highly spiced foods, no fried foods, no rich pastry and rich cakes. The child should not be given a great variety of foods at any one meal. The variety in the diet should come rather from meal to meal and from day to day.

Second: The food administered to the growing child should be in a condition such as can be easily cared for by the digestive apparatus of the growing organisms. Often the digestibility of a food depends on its fineness of division. The child should be taught to chew thoroughly, but to a certain extent the preparation in the kitchen should take into consideration the child's limited powers of mastication. Such foods as peas, beans, and lentils should be rubbed through a strainer for the younger children and served in a cream soup or as a vegetable. Corn, if given at all to small children, should be scored and only the milk of the corn allowed the child. Fresh bread and rolls fed to a child reach the stomach in a gummy mass. Large chunks of cheese are bad. The cheese is a concentrated food and should be grated or dissolved in a milk sauce. Bananas slip down in large pieces and cause discomfort.

Fruits for the young children should be thoroughly cooked or scraped. The fruits should be free from all coarse fibre and skinned before eaten. This again is due to the fact that the di-

gestive system of the child is not in shape to take care of the coarse fibrous material.

Water is needed in the daily diet of the child. It may be taken between meals and in a delicate amount at meal time, but the food must not be washed down with the liquid. The water should be pure, and if one is not sure that it is free from contamination, it should be boiled and cooled before given to the child. Several glasses are needed each day. Under no circumstances should the child be given tea or coffee. These beverages stimulate the nerves and take away the appetite. Hot water with a little milk and sugar or "crust" coffee made from toasted bread or wheat cocoa will give a hot drink for the cold morning.

THE AMOUNT OF FOOD REQUIRED FOR THE GROWING CHILD

The strong child who is active in play and work demands more and more food as he grows larger. If he has the right kind of food, takes it at the right time, and chews it thoroughly, there is little danger that he will over-eat. The less vigorous child, the child who gets up unrefreshed in the morning, perhaps because he has had foul air to breathe through the night, or the child whose diet consists largely of candy, pickles, ice cream cones, chili, tamales, and other food bought from the itinerant vender may not get enough food to make him grow as he should and provide for his activity. One can determine whether or not the growing child is gaining enough by weighing him. But whether he is pale, listless, irritable because he has not had enough food, or for some other reason, is not always easy to tell. To determine whether the lack of proper nourishment is to blame, certain amounts have been determined upon which are suitable for the average child (see table below), and we may compare the amount given with these standards. Just as clothes are made up in sizes to fit special ages, so a certain amount of food is suggested for the child between varying ages. But, as in planning a dress for a certain age, the size of the child as well as the age must be considered, so in determining the amount of food needed, the weight as well as the age must be taken into account.

We cannot measure our food in pounds and ounces and say we will give so many pounds or ounces each day to each individ-

ual. The foods contain different substances of different values. Many foods contain much water and waste. Because of this condition, in order to measure the amount of nutriment in any food, we measure the heat that is obtained from that food when it is burned. All foods containing protein, starch, sugar, and fats are burned in the body before they are available for use in the body. The unit of heat used for measuring the heat produced by the burning of these foods is called the *calorie*. Just as we say five or six quarts of milk, so we say five or six calories of heat. A calorie is merely a unit for measuring a specific amount of heat. The amount of heat required to raise the temperature of one pint of water four degrees Fahrenheit is called a calorie. For convenience dietaries are now planned on the basis of one hundred calorie portions. Each of the following food portions represent about one hundred calories:

Name of food and Serving	Ounces
Bread (corn), small square.....	1.30
Bread (white), thick slice.....	1.30
Bread (Brown), thick slice.....	1.50
Corn flakes, cereal dish (1 cup).....	.97
Oats (rolled)88
Hominy (cooked), large serving.....	4.20
Hominy (uncooked), 2½ tablespoons.....	.92
Rice (boiled), serving dish.....	3.10
Rice (uncooked), 2½ tablespoons.....	.98
Shredded wheat, 1 biscuit.....	.94
Wheat flour, 4 teaspoons.....	.97
Eggs, 1	2.10
Chocolate (bitter), ½ square.....	.56
Puffed rice, 1¾ cups.....	.97
Potatoes, 1 medium potato.....	4.20
Cabbage, 3 cups.....	11.00
Split pea, 1⅔ tablespoonfuls.....	1.00
Whole milk, small glass.....	4.90
Cheese (full cream), 1½ cubic inches.....	.82
Cottage cheese, 4 cubic inches.....	3.12
Banana, 1 large.....	3.50
Apples, 2 apples (small).....	7.30

Name of Food and Serving	Ounces
Grape juice, small glass.....	4.20
Cream, $\frac{1}{4}$ glass.....	1.70
Sponge cake, small piece.....	.89
Custard (milk), ordinary cup.....	4.29
Olives (green), 7 olives.....	1.10
Olives (ripe), 7 olives.....	1.30
Sugar, 3 teaspoonfuls or $1\frac{1}{2}$ lumps.....	.86
Pecans, 846
Celery	19.00
Lettuce	17.30

When children are of normal size, development and activity they require per day about as follows:

	Age in Years	Calories
Boys	14-17	2700-3000
Girls	14-17	2200-2600
Children	10-13	1800-2200
Children	6-9	1400-2000
Children	2-5	1200-1500
Children	1-2	900-1200
Infants	Under 1 year	45 calories per pound of weight.

Should children be under or over size their requirement can be figured from the following table:

- From 1-2 years of age about 45-40 calories per pound.
- From 2-5 years of age about 40-35 calories per pound.
- From 6-9 years of age about 35-31 calories per pound.
- From 10-13 years of age about 31-27 calories per pound.
- From 14-17 years of age about 27-20 calories per pound.

One must remember in using the calorie that it measures only the amount of food. It is not enough merely to see that the child secures the needed number of calories. A five-year-old could get 1200 calories from sugar alone but that child would not grow. A child must have a "mixed diet," containing protein, fats, sugars, starches, and minerals. Mineral salts cannot be burned, so they have no fuel value. They are, however, a most important food constituent. They are absolutely necessary, and must be present in sufficient amounts if the child is to develop

normally. Lack of lime salts causes rickets; lack of iron, anemia. Milk is very deficient in iron, and for this reason, as a child approaches the end of its first year, the milk diet should be supplemented with other foods, eggs and strained cereals, for example. A mother must select with great care, using each day milk, eggs, cereals, green vegetables, fruits and bread. Where the child has a carefully planned, mixed diet it seldom fails to get enough of each of the needed materials to build the body and furnish the energy for activity.

WHEN TO ADMINISTER THE FOOD TO THE GROWING CHILD

The child should have regular meals provided and should eat at regular times. Little children should have a morning luncheon at eleven o'clock. They should be continued after the child enters schools and should continue through the first three or four years of the child's school life. A glass of milk and a graham cracker are sufficient. Where schools have given this luncheon to the children a marked difference has been noted in the amount of work the children can accomplish in the last morning hour as compared with the work of children with no luncheon. Very little children need a simple luncheon in the afternoon. This luncheon, again, may consist of a cracker and a glass of milk, or a baked apple, with a slice of bread and butter.

THE COST OF FOOD REQUIRED FOR THE GROWING CHILD

This is a difficult question. The price of food varies in different parts of the country, in different parts of the city, and at different times of the year. If the money must go as far as possible, remember there is more nourishment in the cheap cuts of meat; that the broken rice is as good as the whole kernels; that homemade bread is the best and cheapest; that butterine and cottonseed oils are cheaper than butter and are fairly good substitutes; that beans and peas may be used in place of meat; that skimmed milk contains much good protein that can be eaten in the form of cottage cheese; that one quart of whole milk gives as much strength as two pounds of potatoes, four pounds of cabbage, eight eggs, or three-quarters of a pound of round steak. The cost of these articles is as follows:

1 quart of milk .10	{	8 eggs24
		2 pounds potatoes05
		$\frac{3}{4}$ pound steak16
		4 pounds cabbage10

Remember that in buying food at the baker's ready prepared you are paying the baker for doing work that you can do better and cheaper yourself and that in buying canned goods you are usually guilty of the same extravagance.

Buy the non-perishable supplies, where it is possible, in quantities, thus securing the advantage of a lower price and making it possible to purchase articles of food when they are cheapest and best on the market.

MEALS.

*Below are some suggested meals with the amount for serving given:

CHILDREN'S MEALS.

Food for one day for a child 2-5. Price about 15c. Fuel value 1200-1500 calories.

Breakfast—7:30 o'clock.

Orange juice, 4 tablespoonfuls.

Cream of wheat, $\frac{1}{4}$ cup.

Milk, $1\frac{1}{4}$ cups.

Toast.

Lunch—11 o'clock.

Milk, 1 glass.

Bread and butter, 1 thin slice.

Dinner—12:30 o'clock.

Cream of split pea soup, 1 cup.

Bread and butter, 2 thin slices of bread, 1 pat of butter.

Rice pudding and raisins, 1 generous serving.

Lunch—4 o'clock.

Graham crackers, 2.

*We are indebted to the Chicago Child Welfare for a part of this material on meals.

Supper.

Milk toast, 2 thin slices, 1 glass top milk.

Baked apple, 1.

Food for one day for a child 6-9. Price about 15c. Fuel value, 1400 to 2000 calories.

Breakfast.

Cream of wheat and dates, $\frac{1}{2}$ cup of cream of wheat and 4 dates.

Milk, $\frac{1}{3}$ cup top milk.

Toast with butter, 1 slice.

Lunch—11 o'clock.

Milk, 1 glass.

Bread and butter, 1 slice.

Dinner.

Fish chowder, 1 cup.

Crackers, 2.

Rhubarb sauce, 1 cup.

Cookies, 2.

Supper.

Creamed egg, 1 egg and $\frac{1}{2}$ cup cream sauce.

Toast, 2 slices.

Milk, 1 glass.

Gingerbread, 1 piece.

Breakfast.

Oatmeal, $\frac{1}{2}$ cup.

Milk, $\frac{1}{4}$ cup top milk.

Toast and butter, 2 slices.

Stewed dried apples, 1 sauce dish.

Lunch.

Rice and cheese, $\frac{1}{2}$ cup.

Bread and butter, 2 slices.

Bananas, 1.

Dinner.

Lentil stew with potatoes.

Corn bread and butter, 2 slices.

Prune whip.

The following meals are for the three children of a family

living on a \$1000 income and they are so planned that, by increasing the amount of food or making simple additions to the menu of the younger children, the older children are provided for.

Child 2-5 years of age: 1200-1500 calories.

Breakfast—7:30 o'clock.

Orange juice, 4 tablespoons.

Cream of wheat, $\frac{1}{4}$ cup.

Milk, $1\frac{1}{2}$ cups.

Bread (stale), 1 slice.

Lunch—11 o'clock.

Milk, 1 cup.

Bread (stale), 1 slice.

Butter, 1 teaspoonful.

Dinner—1 o'clock.

Baked potato, 1.

Boiled onions (mashed), 2.

Bread and butter, 1 slice.

Milk to drink, 1 cup.

Baked apple, 1.

Boiled rice, 1 cup.

Milk, $\frac{3}{4}$ cup.

Bread and butter, 1 slice.

SUBSTITUTES OR ADDITIONS

For cream of wheat or rice: Farina, Wheatena, Pettyjohn or other cereal.

For orange juice and baked apple: Prune pulp and sauce.

For onion: Spinach, strained peas, stewed celery.

An egg every day may take the place of a part of the milk ($\frac{1}{2}$ cup), and should be given two or three times a week.

Child 6-9 years of age: 1500-1800 calories.

Breakfast—7:30 o'clock.

Cream of wheat, $\frac{1}{2}$ cup.

Top milk, $\frac{1}{4}$ cup.

Stewed prunes, 5.
Toast, 1 slice.
Milk to drink, 1 glass.

Dinner—1 o'clock.

Pea soup, 1 cup.
Croutons, 1 slice bread.
Boiled onions, 2 small.
Baked potato, 1 large.
Molasses cookies, 2.

Supper—5:30 o'clock.

Cream toast, 2 slices bread.
Rice pudding (with milk and sugar), 1 cup.
Milk to drink, 1 glass.

SUBSTITUTES OR ADDITIONS

Cream of wheat.
For peas: Strained beans or lentils.
For onions: Spinach, cauliflower, carrots (well cooked), lettuce.
For prunes: Ripe apples, dates, baked bananas, all stewed fruits.
For pudding: Junkets, custards, ice cream, blanc mange, bread pudding, and simple desserts.
For cookies: Sponge cake, gingerbread, plain cakes or cookies.
Child 10-13 years of age: 1800-2200 calories.

Breakfast—7:30 o'clock.

Cream of wheat, $\frac{3}{4}$ cup.
Top milk, $\frac{1}{2}$ cup.
Stewed prunes, 7 prunes.
Toast, 2 slices.
Milk to drink, 1 cup.

Luncheon—1 o'clock.

Pea soup, 1 cup.
Boiled onions, 2 small.

Baked potato, 1 large.
Bread and butter, 2 slices.
Cookies, 3.

Dinner—5:30 o'clock.

Baked fish, small serving.
Creamed potatoes, $\frac{3}{4}$ cup.
Spinach, $\frac{1}{2}$ cup.
Bread and butter, 2 slices.
Rice pudding (milk and sugar), 1 cup.

SUBSTITUTES OR ADDITIONS

For cream of wheat: Any well cooked cereal.
For fish: Rare beefsteak, roast beef or mutton chops, boiled mutton, salt fish.
For prunes: Any fruit (uncooked or cooked).
For vegetables: Any well cooked or fresh vegetables.
For dessert: All simple desserts.

The above menus are inexpensive but they provide little fresh fruits and vegetables. They are not the best possible because of this omission. The growing child needs in its diet the fresh fruits and vegetables daily.

The following menus suggest meals for children between the ages of two and three years and three and six years. The cost here exceeds 20 cents per day.

FROM TWO TO THREE YEARS

Breakfast.

1. Juice of one sweet orange, pulp of six stewed prunes, pineapple juice (one ounce), a baked apple or apple sauce.
2. A cereal, such as oatmeal, farina, cream of wheat, hominy, cornmeal or rice slightly sweetened or buttered as preferred, with the addition of top milk (top sixteen ounces), or a soft boiled or poached egg with stale bread or toast.
3. A glass of milk.

Dinner.

1. Broth or soup made of chicken, beef or mutton, thickened with arrow root, split peas or rice with the addition of the yolk of an egg or toast squares.

2. Scraped beef, white meat of chicken, broiled fish, as halibut (two ounces), or two slices of broiled crisp bacon.

3. Mashed or baked potatoes, macaroni, peas, spinach, carrots, beets, squash or cauliflower.

4. A glass of milk with educator or graham crackers, or stale bread buttered.

5. Dessert: Apple sauce, baked apple, rice junket, custards.

Supper.

1. Stewed fruit, a cereal or egg (if not taken for breakfast), bread and milk or custard, cup of warm milk or cocoa, crackers or zwieback. Graham crackers or stale graham bread, if cost stipated.

FROM THREE TO SIX YEARS

Breakfast.

1. Fruits: oranges, apples, pears, stewed prunes.

2. Cereal or eggs (not both) oatmeal, hominy, corn meal, rice and wheat preparations well cooked and salted, with thin cream and sugar or butter and salt.

3. Eggs: Soft-boiled, poached, omelet, scrambled.

4. Milk or cocoa to drink, stale bread and butter.

Dinner.

1. Soups: Beef, chicken or mutton.

2. Chicken, rare beefsteak, roast beef, fish or lamb chops.

3. Vegetables: Spinach, carrots, string beans, peas, cauliflower tops, mashed or baked potatoes, beets, lettuce (without vinegar), macaroni, spaghetti.

4. Bread and butter (not fresh bread or rolls).

5. Dessert: Custard, rice or bread pudding, tapioca, chocolate pudding, ice cream (once a week), corn-starch pudding, stewed prunes or baked apples.

6. Milk.

Supper.

1. Milk toast or a thick soup, as pea or cream of celery, or a cereal or thin cream. Stewed fruit or a custard, or a plain pudding, jam or jelly, graham crackers and milk.

2. Bread and butter.

All menus given are prepared for a child of normal health. Individual cases will occur where certain things cannot be given to certain children. In the case of one child eggs caused distress. The mother must understand the child individually, and eliminate from its diet those foods which cause discomfort.

The method of serving foods aids in their digestion. The child should eat in a pleasant and well aired room. The food should be served in an attractive, pleasing way. Especially is this true of the child after he has reached the adolescent period, where the nervous system is overstrained. Confusion, worry, and untidiness act directly on the digestive juices with harmful effects to the child.

In general, the foods for the growing child should be simple, should be easy of digestion, should be well served. The diet should not furnish tea or coffee, pork, fried foods and gravies, hot breads, pies, bananas, cucumbers and cabbage. The diet should not administer foods, such as beans, peas, lentils, cheese, nuts, and peanuts, unless they are in a fine state of division. The simpler the diet, the simpler the preparation, the better it is for the growing child.

A FEW RECIPES

CEREALS

In general cereals should be cooked as follows:

Have the water rapidly boiling. Add one teaspoonful of salt for each cup of cereal. Sprinkle the cereal slowly into the water, stirring until it is well mixed, and boil for five minutes. Continue the cooking without stirring, either in a double boiler or with a piece of asbestos under the saucepan. A double boiler may be made by fitting together two saucepans, nearly of the same size, putting the larger one on top.

Fine cereals need three and a half to six times as much water as cereal. The coarser cereals require two to three times as much water as cereal.

Cream of wheat, wheatena, Quaker oats, wheat germ, malt cereal should be cooked thirty to forty minutes; coarse oat meal, corn meal and cracked wheat from two to six hours.

The fireless cooker is excellent for cereals. Add cereal to boiling salted water. Boil ten minutes. Put in cooker and allow to stand over night.

Dates, cooked prunes, or other fruit, cut in small pieces, may be stirred into the cereal before serving.

VEGETABLES

Wash or scrub vegetables in cold water. Cook until tender in salted boiling water. Withered vegetables may be freshened by putting in cold water in an hour or two. This is especially true of carrots, potatoes, and turnips. The time for cooking varies very much with the age of the vegetables. This table gives the time for cooking some kinds of vegetables:

Potatoes, 30 minutes.	Beets, 2 hours.
Carrots, 45 minutes.	Cabbage, 20 minutes.
Onions, 60 minutes.	Spinach, 30 to 45 minutes.
Turnips, 45 minutes.	Squash, 30 to 45 minutes.

DRIED FRUITS

Wash the fruit thoroughly, add four or five times as much water as fruit, and soak from twelve to twenty-four hours. Bring to a boil and put into a fireless cooker. Sugar may be added if desired. Prunes need none if the juice is boiled down. Apricots, peaches and apples need little. With 48 hours' soaking apricots and peaches may be cooked with only a few minutes boiling.

LENTILS

Pick over and wash the lentils and soak them over night, or even twenty-four hours.

Pour off the water and add about four times as much fresh water as there are lentils. Add a teaspoon of salt water for each cup of lentils. A slice of salt pork and an onion may be added if desired. Boil for half an hour and then cook in the fireless cooker for six or eight hours, or simmer slowly on the stove.

CREAM SOUPS.

Delicious cream soups may be made from the water in which vegetables, such as spinach, celery, asparagus, cauliflower and cabbage have been cooked. For two cups of the vegetable water allow an equal amount of milk. Thicken with three level tablespoons of flour rubbed smooth in a little milk. Stir in two tablespoons of butter or butterine or clarified beef fat, and salt to taste. In the same way cream soups may be made from dried green or split peas, dried lima beans, and lentils, as well as from corn, onions, potatoes, and tomatoes. The dried vegetables should be soaked and used with the water in which they were cooked. Unless liked very thick, a little less flour may be used for thickening, since they contain so much starch. (Two tablespoons to the quart is sufficient.)

CREAM OF TOMATO SOUP.

2 tablespoons of fat.	2 cups of milk.
1 tablespoon of salt.	2 cups of tomato.
4 tablespoons of flour.	

Mix four tablespoons of flour with a little cold tomato, add the rest of the tomato and bring to the boiling point. Strain, cool, and then add the milk. Heat just before serving and add the fat and salt. This will serve six people.

POTATO SOUP.

3 potatoes.	1 tablespoon of fat.
1 quart milk.	1 tablespoon of salt.
2 tablespoons of flour.	

Boil potatoes in salted water until soft; mash and beat until light. Add milk gradually. Mix flour with a little cold liquid and add to the hot potato mixture. Let come to the boiling point and then add the butter and salt. This will serve six people.

BEEF STEW WITH VEGETABLES.

Cut into pieces one or two pounds of stew meat (neck piece, aitch bone or shank may be used.) Cover well with boiling water and simmer for two or three hours or until the meat is nearly done. Add potatoes and other vegetables, such as carrots, onions, turnips; cut in small pieces, and cook until tender. Season with salt. Thicken or serve thin as desired. Rice and leftover cereal may be used for thickening.

This also may be cooked in the fireless cooker. Cook the meat and vegetables in boiling water ten minutes, put into the fireless cooker for four to five hours. Season with salt and serve hot.

FISH CHOWDER.

One pound of cod, haddock or any white fish; six medium sized potatoes cut into small pieces, one sliced onion, one or two slices of salt pork cut into small pieces, two teaspoons salt, two cups milk, four cups water. Wash and cut fish from bones. Put four cups of cold water over bones and cook 20 minutes. Strain out bones and add pork, potatoes, and onion to this water; cook 15 minutes, then add fish, cover and simmer 15 minutes. Then add milk, salt and crackers and cook five minutes. Serve hot.

SCOTCH BROTH.

Wash and cut into pieces two pounds of neck of mutton. Put meat and bones into kettle with two quarts of cold water and bring quickly to the boiling point; add from one-half to three-fourths cup of barley that has been soaked over night in cold water. Simmer one to one and one-half hours or until the meat is tender. Then add two carrots, one turnip, one onion, and two potatoes cut into small pieces. Cook until vegetables are soft. Serve hot.

If the fireless cooker is used, add vegetables with the barley. Boil ten minutes and put into the cooker for four or five hours.